WE CLAIM:

1. (cancelled)

2. (currently amended) The process of claim ~~1~~ 22, wherein, prior to immersion in the silane solution, the substrate carrying carbon nanotubes is treated with one of an alcohol and an acid.

3. (original) The process of claim 2, wherein the substrate carrying carbon nanotubes is treated with methanol.

4. (original) The process of claim 2, wherein the substrate carrying carbon nanotubes is treated with nitric acid.

5. (original) The process of claim 4, wherein the substrate carrying carbon nanotubes is treated with 70% nitric acid for 2 to 20 hours.

6. (cancelled)

7. (currently amended) The process of claim ~~1~~ 22, wherein the substrate is carbon paper and the carbon nanotubes are multi-walled carbon nanotubes.

8. (cancelled)

9. (cancelled)

10. (currently amended) The process of claim ~~9~~ 22, wherein the salt is at least one of platinum chloride and ruthenium chloride.

11. (cancelled)

12. (currently amended) The process of claim ~~11~~ 22, wherein the silane solution contains sufficient salt to give a concentration of at least one of platinum and ruthenium of 0.02 to 2M.

13. (currently amended) The process of claim ~~11~~ 22, wherein the silane solution is a solution of 0.04 M $PtCl_2$, 1 volume percent 2(4-chlorosulfonylphenyl)

ethyl trichlorosilane and 6 volume percent water in ethanol.

14. (original) The process of claim 13, wherein the composite structure is reduced at a temperature of 550 to 600°C in a hydrogen-argon atmosphere.

15. (original) The process of claim 14, wherein reduction of the composite structure is effected by heating the structure at 580°C in a stream of H_2-Ar for 15 minutes.

16. (original) A process for producing carbon nanotubes with platinum particles thereon comprising the steps of:

(a) preparing a silane solution of 2(4-chlorosulfonylphenyl) ethyl trichlorosilane and platinum chloride;

(b) immersing a carbon fiber substrate carrying multiwalled carbon nanotubes in the silane solution to yield a composite structure of carbon fiber substrate, carbon nanotubes and platinum particles; and

©) reducing the composite structure to yield a composite of carbon fiber substrate, multiwalled carbon nanotubes and platinum particles on the nanotubes.

17. (original) The process of claim 16, wherein carbon fiber substrate carrying the carbon nanotubes is immersed in methanol before immersion in the silane solution.

18. (original) The process of claim 11, wherein the silane solution is a solution of 0.04 M $RuCl_2$, 1 volume percent 2(4-chlorosulfonylphenyl) ethyl trichlorosilane and 6 volume percent water in ethanol.

19. (original) A process for producing carbon nanotubes with platinum/ruthenium alloy particles thereon comprising the steps of:

(a) preparing a silane solution of 2-(4-chlorosulfonylphenyl) ethyl trichlorosilane, platinum chloride and ruthenium chloride;

(b) immersing a carbon fiber substrate carrying multiwalled carbon nanotubes in the silane solution to yield a composite structure of carbon fiber substrate, carbon nanotubes and platinum/ruthenium alloy particles; and

©) reducing the composite structure to yield a composite of carbon fiber substrate, multiwalled carbon nanotubes and platinum/ruthenium alloy particles on the nanotubes.

20. (original) The process of claim ~~18~~ 19, wherein the silane solution contains 0.04M $PtCl_2$, 0.04M $RuCl_2$, 1 vol % 2-(4-chlorosulfonylphenyl) ethyl trichlorosilane, and 6 vol % water and the remainder ethanol.

21. (original) The process of claim 19, wherein the substrate carrying the carbon nanotubes is pretreated by one of (i) methanol immersion, (ii) silane pyrolysis in an H_2 and Ar atmosphere and (iii) immersion in concentrated 50:50 H_2SO_4 + HNO_3 before immersion in the silane solution.

22. (new) A process for producing carbon nanotubes with metal catalyst particles thereon comprising the steps of:

(a) preparing a 2(4-chlorosulfonylphenyl) ethyl trichlorosilane solution of a metal catalyst, wherein the metal catalyst is at least one of platinum and ruthenium;

(b) immersing an electrically conducting substrate carrying carbon nanotubes in the silane solution, the silane solution containing at least one of a platinum and a ruthenium salt to yield a composite structure of

substrate, carbon nanotube and metal catalyst; and

(c) reducing the composite structure to yield a composite of substrate, carbon nanotube and metal catalyst particles.